

Application No. 09/929,703

REMARKS

Favorable reconsideration and allowance of the subject application are respectfully requested. Claims 1-3, 5, 7, 10, 13-14, and 16-33 are pending in the present application, with claims 1, 13, 16, and 33 being independent.

Claim Rejections under 35 U.S.C. §103

The Examiner rejected claims 1-2, 7, 16-17, 20-22, 24, 25, 30, and 32 under 35 U.S.C. §103(e) as being anticipated by Schafer (US Patent No. 6,404,755); Claims 18-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schafer in view of Mousley (US Application No. 2002/0172160); Claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over Schafer in view of Fujiwara (US Patent No. 4,794,649); Claim 14 is rejected under 35 U.S.C. §103(a) as being unpatentable over Schafer and Fujiwara, and further in view of Ricci et al (US Patent No. 6,463,039); Claim 31 is rejected under 35 U.S.C. §103(a) as being unpatentable over Schafer in view of Ricci et al; and Claim 26 is rejected under 35 U.S.C. §103(a) as being unpatentable over Schafer in view of Landoisi (US Patent No. 6,570,842).

Each of the above rejections rely on Schafer for showing the features of Independent claims 1, 13, 16 and 33, although it is noted that the rejection statement at the bottom of page 2 fails to make a proper statement of rejection of independent claims 13 and 33. In any event the rejections are traversed because features defined in each of independent claims 1, 13, 16 and 33 are not shown or disclosed by Schafer.

The purpose of the present invention is to provide improved communication between a first and second transceiver by transmitting various different information

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symbols on a single wave carrier by using different modulation indices for the various different individual information symbols. In this way the carrier wave is modulated so that at least one of the physical parameters of the carrier is changed in the first transceiver. Therefore, with different information symbols the types of information only need to be partially coded in the form of data words so that the data rate can be substantially increased. Thus, more than coded data words can be sent such as control signals on the carrier wave.

The result of this method can be, as an example the improved transponder for operation with a base station in an automobile in which the transponder does not have a power source (passive) but must glean power inductively from the base station. These systems must function rapidly for a consumer to have any confidence so that time lost in converting data via a protocol is critical and the necessary power to generate clocking is limited because the power is taken from the energy from the base station. This further subtraction of energy considerably shortens the effective distance between the base unit and the transponder. The present invention solves this problem by increasing the data rate as mentioned above and by replacing the need for clock logic in the passive transponder. This clock can be one of the claimed different information symbols. The second transceiver can be controlled by the first transceiver by synchronization and the data rate can be variably set without coding with data words because of the use of modulation indices.

In contrast, Schafer has a system which adjusts information density when a receiver and transmitter are able to communicate under more or less ideal conditions. In other words when there is no interference to microwave communication, the rate is

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increased. The system uses QAM and therefore two wave carriers, and there is a TDMA since many units communicate with each other. The rate or information density of time bursts associated with each station is independently adjustable. Schafer uses signal strength or signal to noise ratio as barometers to make the necessary adjustment to raise or lower the information density. The Examiner refers to modulation indexes in Schafer. However this refers to a low modulation index during periods of low signal strength or s/n ratio and high modulation index during high signal strength or high s/n ratio. (Column2, lines 37-49). This is significantly different from the purpose and claim structure of each of independent claims 1, 13, 16, and 33 which variously claim transmitting a plurality of different information symbols between a first transceiver and a second transceiver by modulating a carrier signal, wherein a different modulation index is assigned to each one of the different information symbols, each of the information symbols conveying different type data, and the modulation indices identifying a type of the conveyed data based on an amplitude of the amplitude modulation index. Additionally at least one characteristic physical variable of the carrier signal is modulated in accordance with the different modulation indices assigned respectively to the different information symbols that are modulated onto the carrier signal to produce a modulated signal.

The above amendments specifically detail that the information symbols are each different and they convey different types of data. It is submitted that Schafer has a different concept and a different implementation and that because of the different concept the differences between the claimed invention and Schafer are not obvious whether Schafer is considered alone or with any of Fujiwara, Ricci et al, Mousley or Landolsi.

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This is submitted as true even if, assuming *arguendo*, the statement for the showing of these references is accepted as correct. Each dependent claim depends from one of independent claims 1, 13, 16 or 33 and are thus also submitted as defining over the art of record.

Therefore in view of the distinguishing features between the claimed invention, as defined in independent claims 1, 13, 16, and 33, and the references, which features are not shown or disclosed or made obvious by any combination of references, Applicant respectfully requests the withdrawal of the rejection and the passing of this case to issue.

CONCLUSION

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Martin R. Geissler, Applicants' Attorney at 1.703.621.7140 so that such issues may be resolved as expeditiously as possible.

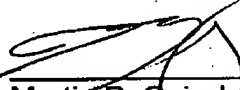
For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 50-3828 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully Submitted,



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